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Group 2700

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**OFFICIAL****ALLOWANCE AND ISSUE FEE DUE**

LU21/1231

COOLEY GODWARD LLP  
LEONARD, LEIBSON & TATUM  
FIVE PALO ALTO SQUARE  
3000 EL CAMINO REAL  
PALO ALTO CA 94306

APPLICATION NO.	SEARCH DATE	TOTAL CLAIMS	SEARCH AND EXAMINER AND UNIT	DATE MAILED
08/659,952	06/07/96	022	CHEN, R	2782 12/31/98
FIVE NUMBER Applicant	LUDWIG,	35 USG 154(b) term ext.	8 Days.	
TITLE OF INVENTION SYSTEM FOR CALL REQUEST WHICH RESULTS IN FIRST AND SECOND DEFINING CALL STATE CONSISTING OF ACTIVE OR HOLD FOR ITS AND DEVICE (AS AMENDED).				
ATTY/B DOCKET NO.	CLASS/SUBCLASS	BATCH NO.	APPLN TYPE	SMALL ENTITY
Z VCOR-001/09U	395-200,348	N/A	UTILITY	YES \$685

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.  
PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS  
APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

**HOW TO RESPOND TO THIS NOTICE**

I. Review the SMALL ENTITY status shown above.  
If the SMALL ENTITY is shown as YES, verify your  
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- A. If the status is changed, pay twice the amount of the  
FEE DUE shown above. See Part A of the  
Trademark Office's "Issue Fee Transmittal".
- B. If the status is not changed, pay the amount  
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- II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your  
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should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part  
B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give application number and batch number.  
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

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B. If a verified statement of Small Entity Status below, or later  
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DUE: 28 Fe 99  
EOL: 31 Mar 99

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**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1998 require payment of  
maintenance fees. It is patentee's responsibility to timely pay required maintenance  
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COOLEY GODWARD LLP  
04-20276





UNITED STATES PATENT AND TRADEMARK OFFICE  
ADDRESS: COMMISSIONER OF PATENTS AND TRADEMARKS  
WASHINGTON, D.C. 20591

APPLICANT'S NAME	PATENT	PERIODICAL	ATTORNEY DOCKET NO.
COOLEY GODWARD CASTRO HUDDLESON & TATUM	LUDING		L UDOR-001/09U

08/25/98 06/25/98 LUDING

EXAMINER

LM21/1231  
COOLEY GODWARD CASTRO HUDDLESON & TATUM  
FIVE PALO ALTO SQUARE  
3000 EL CAMINO REAL  
PALO ALTO CA 94306

2782

14/F

12/31/98

This is a CERTIFICATION FORM WHICH IS USED IN URGENT OR URGENT-1 CASES.  
COMMISSIONER OF PATENTS AND TRADEMARKS

### NOTICE OF ALLOWABILITY

All other pending allowances, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If no response is made by the date set forth below, a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed to the inventor.

This communication is responsive to Amendment F-1:kd on 12/21/98.

The following claim(s) have 1-20 21-27 29-36 filed hereto 1-2.

The changes filed on 12/15/98 are acceptable.

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(e)).

Certified copies not received \_\_\_\_\_.

Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.138(a).

Note the assigned EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discusses that the date of issuance of the patent or certificate of registration or declaration is required.

Applicant may file a statement of reasons.

Requesting extension of time under the provisions of Draftsperson's Patent Drawing Review, PTO-848, attached hereto or to Paper No. \_\_\_\_\_.

Including changes required by the proposed drawing correction filed on \_\_\_\_\_ which has been approved by the Examiner.

Including changes required by the witness Examiner's Amendment/Committee.

Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be placed on the reverse side of the drawings. The drawings should be filed on a separate paper with a transmittal letter addressed to the witness Draftsperson.

Note the attached Examiner's comments regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this paper should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

#### Attachment(s)

- Notice of References Cited, PTO-882
- Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_.
- Notice of Draftsperson's Patent Drawing Review, PTO-848
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Committee
- Examiner's Comments Regarding Requirements for Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance

THOMAS C. LEE  
SUPERVISORY PATENT EXAMINER  
GROUP 2700

Application/Control Number: 08/659,952

Page 2

Art Unit: 2782

**Part III EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Craig Opperman on December 22, 1998.

2. The application has been amended as follows:

**IN THE CLAIMS:**

Canceled Claims 21 & 28.

**IN THE ABSTRACT**

Please replace the abstract with the following:

Application/Control Number: 08/659,952

Page 3

Art Unit: 2782

### Abstract

A teleconferencing/videoconferencing system has (1) a plurality of AV device, each capable of originating and reproducing user related audio and video signals; (2) a plurality of communications ports, each supporting the switch connections of video in, video out, audio in, and audio out; and (3) a communication path arranged for transport of audio and video signals. The system controls communications, over the communications path, between two of the AV devices by creating a first and second call handles, respectively associated with the two AV devices. Each call handle defines a call state (Either active and/or hold), and the AV device's port's switch connections involved in the communication connection. The system also allows a user to remotely put another caller on hold or remotely disconnect another caller.

Application/Control Number: 08/659,952

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Art Unit: 2782

3. Pursuant to MPEP 606.01, the title has been changed to read:

**"SYSTEM FOR CALL REQUEST WHICH RESULTS IN FIRST AND SECOND CALL HANDLE DEFINING CALL STATE CONSISTING OF ACTIVE OR HOLD FOR ITS RESPECTIVE AV DEVICE."**

4. The following is an Examiner's Statement of Reasons for Allowance:

The prior art of record fails to teach or suggest individually or in combination call request which results in a first handle associated with one of two AV devices and second call handle associated with the other AV device which defines a call state being at least one of the group consisting of active and hold in a teleconferencing/videoconferencing system.

#### *Conclusion*

5. Any inquiry concerning this communication should be directed to Anderson Chen, whose telephone number is (703) 305-9593 or via email, [anderson.chen@uspto.gov](mailto:anderson.chen@uspto.gov). The Examiner can normally be reached Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Thomas C. Lee, can be reached at (703) 305-9717.

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Application/Control Number: 08/659,952

Page 5

Art Unit: 2782

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

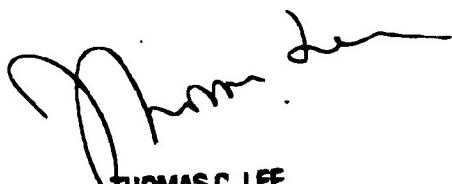
(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-5359 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

✓  
Anderson Chen  
December 23, 1998

  
THOMAS C. LEE  
SUPERVISORY PATENT EXAMINER  
GROUP 2700

<b>Interview Summary</b>	Application No. <b>08/859,952</b>	Applicant(s) <b>L.F. Ludwig et al</b>
	Examiner <b>Anderson I. Chen</b>	Group Art Unit <b>2782</b>

All participants (applicant, applicant's representative, PTO personnel):

(1) Anderson I. Chen

(3) \_\_\_\_\_

(2) Craig Opperman

(4) \_\_\_\_\_

Date of interview Dec 22, 1998

Type:  Telephonic  Personal (copy is given to  applicant  applicant's representative).

Exhibit shown or demonstration conducted:  Yes  No. If yes, brief description:

Agreement  was reached.  was not reached.

Claim(s) discussed: 15, 21, 22, and 28

Identification of prior art discussed:

cited prior art

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:  
Applicant called Examiner to discuss what was allowable in the case. After reviewing the specification and the cited prior art, the Examiner proposed an independent claim with the limitation of call request which results in a first handle associated with one of two AV devices and second call handle associated with the other AV device which defines a call state being at least one of the group consisting of active and hold in a teleconferencing/videoconferencing system.  
Applicant agreed for Claims 15 and 21. For claims 21 and 28, the Applicant disagreed but agreed cancel them in this case and to pursue them in a subsequent case.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1.  It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2.  Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.

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Group 2700

**OFFICIAL****PATENT**

Attorney Docket No: COLB-001/09US

I hereby certify that this correspondence is being transmitted by facsimile addressed to A. Chen, Art Unit 2317, Facsimile Number (703) 308-5359, at United States Patent and Trademark Office, Washington, D.C. 20231 at 11:40 AM on December 16, 1998.

By:

  
Elaine E. Calimquim**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of Lester F. Ludwig, et al

Serial No.: 08/659,952

Examiner: A. Chen

Filed: June 7, 1996

Art Unit: 2317

For: USING "CALL HANDLES" DURING VIDEO CONFERENCING

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BOX AF  
Assistant Commissioner for Patents  
Washington, D.C. 20231

**TRANSMITTAL OF AMENDMENT AFTER FINAL**

Transmitted herewith is:

- (i) a Response to the Final Office Action mailed October 27, 1998; and
- (ii) Fee Transmittal

The fees have been calculated as shown below:

A

Small entity status of this Application under 37 CFR 1.9 and 1.27 has been established by  
 a Verified Declaration previously submitted.

FOR:	Claims after Amend	Claims Prev. Paid	=	Extra Claims <sup>1</sup>	Small Entity Rate Fee	Other Than a Small Entity Rate Fee	Total Claim Fee
Total Claims	22	20		2	\$9 18	\$18	\$18.00
Independent Claims	4	4		0	\$39	\$78	\$0.00
Multiple Dependent Claims Not Previously Presented					\$130	\$260	\$0.00
<b>TOTAL</b>							<b>\$18.00</b>

If difference is negative, enter "0"; if Total Claims after amendment is 20 or less, enter 0; if Independent Claims after amendment is 3 or less, enter 0.

Please charge Deposit Account No. 03-3117 in the amount of \$18.00

An extension of time is requested to provide for timely filing if an extension of time is still required after all papers filed with this transmittal have been considered.

The Commissioner is hereby authorized to charge any underpayment of the following fees associated with this communication, or credit any overpayment to Deposit Account No. 03-3117:

- Any national application filing fees under 37 CFR 1.16.  
 Any patent application processing fees under 37 CFR 1.17.

Cooley Godward LLP  
 Attn: Patent Group  
 Five Palo Alto Square  
 3000 El Camino Real  
 Palo Alto, CA 94306-2155  
 Tel: (650) 843-5000  
 Fax: (650) 857-0663

CPO:eeb

Respectfully submitted,  
**COOLEY GODWARD LLP**

By:

  
 Craig P. Opperman  
 Reg. No. 37,078

JAN 14 1999

USSN 08/659,952

Group 2700 COLB-001/09US

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## CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being transmitted by facsimile addressed to Anderson, Chen, Art Unit 2317, Facsimile Number (703) 308-5359, at United States Patent and Trademark Office, Washington, D.C. 20231 at 12:12pm on December 16, 1998.

By

Elaine E. Calimquim

## **IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Ludwig, et al.  
Serial No.: 08/659,952  
Filed: June 7, 1996

Docket No: COLB-001/09 US  
Art Unit: 2756  
Examiner: Chen, A.

For: "**REPRESENTING AND MANIPULATING A CALL IN VIDEO CONFERENCING**"

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### **AMENDMENT AFTER FINAL**

(Response Under 37 C.F.R. 1.116)

The following amendments reflect discussions with Examiner Anderson Chen. Although these amendments are made after an October 27 Final Office Action, many changes are made to improve the claims' form and not in light of the prior art. Amendments and arguments in response to the Office Action are specifically indicated as such:

*In the Title.*

Please amend the title as shown above.

*In the Abstract*

Please replace the abstract with the following:

**USSN 08/659,952  
COLB-001/09US**

A teleconferencing/videoconferencing system has (1) a plurality of AV devices, each capable of originating and reproducing user related audio and video signals; (2) a plurality of communications ports, each supporting the switch connections of video in, video out, audio in, and audio out; and (3) a communication path arranged for transport of audio and video signals. The system controls communications, over the communication path, between two of the AV devices by creating first and second call handles, respectively associated with the two AV devices. Each call handle defines a call state (either active and/or hold), and the AV device's port's switch connections involved in the communications connection. The system also allows a user to remotely put another caller on hold or remotely disconnect another caller.

*In the Claims*

15. (Amended after Final) A teleconferencing system comprising:

- (a) a plurality of AV devices, each capable of
  - (i) originating and reproducing
    - (1) user related audio and video signals;
- (b) a plurality of communications ports, each supporting
  - (i) at least one of the group of switch connections consisting of
    - (1) video in, video out, audio in and audio out; and
- (c) at least one communication path,
  - (i) arranged for transport
    - (1) of audio and video signals,
  - (ii) between the AV devices,
    - (iii) by way of at least one port
      - (1) associated with each device.]

wherein the system is configured to

- (i) to control a [teleconference call] communication connection
  - (1) [being communications] between [users] two of the AV devices,
  - (2) over the communication path,
- (ii) by [generating] creating.

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- (1) as a result of a call request,
- (2) at least [one] a first call handle,
  - i. associated with one of the two AV devices and, thereafter, [
  - ii. to define each connection
    - i. between an AV device and its associated port,]
- (3) at least a second call handle,
  - i. associated with the other AV device,
- (4) each call handle defining [the],
  - i. for its respective AV device,
  - ii. a call state, [between the respective device and port the state] being at least one of the group consisting of [i. idle, ringing,] active and hold states; and
  - iii. the port switch connections involved in the communications connection[
- (iii) by establishing communications
  - (1) between the devices
  - (2) based on the appropriate call handles' states].

16. (Amended after Final) The system according to claim 15, further comprising

- (a) [a switch; and
- (b) ]at least one signal processor, including
  - (i) at least three communications ports

wherein the system is further configured to

- (i) control communications connections among
  - (1) three or more AV devices and
  - (2) one of the signal processors

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- (ii) by generating a plurality of call handles [to define]
  - (1) [a connection
    - i. from] one associated with each of the three or more AV devices [in the teleconference call]
    - ii. to the switch] and
  - (2) one associated with each of the three or more ports on the signal processor [a connection
    - i. from the switch
    - ii. to the processor
    - iii. for each device in the teleconference call].

17. (Amended after Final) The teleconferencing system of claim 15, wherein the system is further configured to:

- (a) detect,
  - (i) during a first teleconference [call] communication
    - (1) between users of first and second of the AV devices,
    - (ii) an attempt
      - (1) from a third user [of a third of the devices]
      - (2) to initiate a second teleconference communication
        - i. with the second user [of the second device],
- (b) notify
  - (i) the second user [of the second device]
  - (ii) of the attempt; and
- (c) allow
  - (i) the second user

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- [(1) of the second device]
- (ii) to add
  - (1) the third device
  - (2) to the first [teleconference call] communication.

18. (Amended after Final) The teleconferencing system according to claim [17] 16, wherein the system [can accommodate] is configured:

- (a) to detect[ing] and add[ing]
  - (i) a fourth AV device
  - (ii) to [the first] an existing teleconference [call] communication,
- (b) by creating a call handle
  - (i) associated with each of the fourth device and with a fourth- device associated port at the signal processor.

19. (Amended after Final) The teleconferencing system of claim [18] 16, wherein the system is further configured to

- (a) allow any device user
  - (i) active in a teleconference [call] communication
    - (1) with at least one other device user,
- (b) to do at least one of the group consisting of[:]
  - (i) place on hold,
    - (1) at least one of the other device users,
    - (2) by causing the system to change the state, of at least one call handle associated with that other device user, from an active to a hold state.
  - (ii) disconnect
    - (1) at least one of the other users; and

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(iii) select

(2) a new user

i. from among a plurality of potential users and

(3) add the new user

i. to an active teleconference [call] communication,

ii. by causing the system to generate at least one call handle associated with that new user.

**20. (Amended after Final) The teleconferencing system of claim 15, wherein the system can**

(a) support a maximum number of N [calls] communications

(i) for an AV device; and

(b) enable a user,

(i) operating that device,

(ii) to select N of M possible [calls] communications,

(iii) when faced with M possible [calls] communications,

(1) where M is greater than N.

**21. (Amended after Final) A teleconferencing system comprising:**

(a) at least three AV devices, each capable of

(i) originating and reproducing

(ii) user audio and video related signals; and

(b) at least one communication path;

(i) arranged for transport

(1) of audio and video signals,[

(2) between the AV devices,]

(ii) to define a teleconference call

(1) [between] among the device users,

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- (2) in which user audio and video is displayed at a device,  
wherein the system is configured to
- (i) allow a user
    - (1) of any of the devices
    - (2) active in a teleconference call
      - i. with other users,
  - (ii) to do at least one of the group consisting of:
    - (1) place on hold,
      - i. at least one of the other users; and
    - (2) disconnect
      - i. at least one of the other users.

22. (Amended after Final) A method of conducting a teleconferenc[ing]e using a system including:

a plurality of AV devices, each capable of  
originating and reproducing  
audio and video signals,  
a plurality of communications ports each supporting  
at least one of the group of switch connections consisting of  
video in, video out, audio in and audio out; and  
at least one communication path  
arranged for transport of audio and video signals,  
[between the AV devices,  
by way of at least one port,  
associated with each device],  
the method comprising the steps of

- (a) controlling communication[s] connections

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- (i) between [users] two of the AV devices,
- (ii) over the communication path.
- (b) by [generating] creating,
  - (i) as a result of a call request,
  - (ii) at least [one] a first call handle,
    - (1) [to define each connection between an] associated with one of the two AV devices [and its associated port] and, thereafter,
    - (iii) at least a second call handle
      - (1) associated with the other AV device,
    - (iv) each call handle defining [the],
      - (1) for its respective AV device.
      - (2) a call state [between the respective device, and port
        - i. the state] being at least one of the group consisting of [idle, ringing,] active and hold states, and
    - (3) the port switch connections involved in the communications connection[
  - (c) establishing communications
    - (i) between devices
    - (ii) based on the relevant call handles' states].

23. (Amended after Final) The method according to claim 22, wherein the system further includes

[a switch; and]  
at least one signal processor and

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wherein, in controlling communication connections between three or more AV devices, the method further comprises the steps of

(a) generating a plurality of call handles, [to define]

(i) [a connection

(1) from] one associated with each of the three or more AV devices [in the teleconference call

(2) to the switch] and

(ii) one associated with each of the three or more ports on the signal processor [a connection

(1) from the switch

(2) to the processor

(3) for each device in the teleconference call].

24. (Amended after Final) The method of claim 22, wherein the method further comprises the steps of:

(a) detecting,

(i) during a first teleconference [call] communication

(1) between [a] first and second [of the] AV device users,

(ii) an attempt

(1) by a third user

(2) to initiate a second teleconference [call] communication

(3) [to] with the second user,

(b) notifying

(i) the second user

(ii) of the attempt; and

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- (c) allowing
  - (i) the second user
  - (ii) to add
    - (1) the third caller
    - (2) to the first teleconference [call] communication.

25. (Amended after Final) The method of claim 23, further comprising the steps of:

- (a) detecting and adding
  - (i) a fourth user
  - (ii) to [the] an existing teleconference [call] communication
- (b) by creating a call handle
  - (i) associated with each of the fourth device with a fourth-device associated port at the signal processor.

26. (Amended after Final) The method of claim 22, further comprising the steps of

- (a) allowing any device user
  - (i) active in a teleconference [call] communication
    - (1) with at least one other user,
    - (ii) to do at least one of the group consisting of:
      - (1) place on hold,
        - i. at least one of the other device users;
        - ii. by causing the system to change the state, of at least one call handle associated with that other user(s), from active to hold;
      - (2) disconnect
        - i. at least one of the other users; and
      - (3) select
        - i. a new user
          - i. from among a plurality of potential users and

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- ii. add the new user
  - i. to an active teleconference [call] communication.
  - iii. by causing the system to generate at least one call handle associated with that new user.

27. (Amended after Final) The method of claim 22, wherein the system can support a maximum number of N [calls] communications for an AV device;

the method further comprising the steps of:

- (a) enabling a user,
  - (i) operating that device,
- (b) to select N of M possible [calls] communications,
  - (i) when faced with M possible [calls] communications
    - (1) where M is greater than N.

28. (Amended After Final) A method of conducting a teleconference using a system including

at least three AV devices, each capable of originating and reproducing user audio and video related signals; and

at least one communication path;

arranged for transport of audio and video signals,

[between] among the AV devices,

to define a teleconference call

[between] among the device users,

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in which user audio and video is displayed at a device,  
the method comprising the steps of

- (a) allowing a user
  - (i) of any of the devices
  - (ii) active in a teleconference call
    - (1) with other users,
- (b) to do at least one of the group consisting of:
  - (i) place on hold,
    - (1) at least one of the other users; and
  - (ii) disconnect
    - (1) at least one of the other users.

*Please add the following new claims:*

29. The teleconferencing system according to claim 15, wherein

(a) the call handle is created immediately prior to the communication connection being established.

30. The teleconferencing system according to claim 15, wherein

(a) the communication connection

(i) becomes active if, and only if, both call handles associated with the two AV devices have active states; and

(ii) goes on hold if the call handle associated with either of the two AV devices has a hold state.

31. The teleconferencing system according to claim 15, wherein

(a) any call handle includes

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- (i) address information associated with the communication connection.

**32. The teleconferencing system of claim 15, wherein**

- (a) each call handle can also define a state of one of the group consisting of
  - (i) idle and ringing states.

**33. The method according to claim 22, wherein**

- (a) the call handle is created immediately prior to the communication connection being established.

**34. The teleconferencing system according to claim 22, wherein**

- (a) the communication connection
  - (i) becomes active if, and only if, both call handles associated with the two AV devices have active states; and
    - (ii) goes on hold if the call handle associated with either of the two AV devices has a hold state.

**35. The method according to claim 22, wherein**

- (a) any call handle includes
  - (i) address information associated with the communication connection.

**36. The method of claim 22, wherein**

- (a) each call handle can also define a state of one of the group consisting of

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- (i) idle and ringing states.

#### **REMARKS**

Although these amendments are made after discussions with Examiner Chen and to expedite allowance, the following general observations about the prior art may be helpful:

In Examiner Chen's October 27, 1998 Final Office Action, claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruo in view of Hayden.

In making this rejection, the Examiner indicates that "Hayden discloses a call handle (call appearance, Col.5, Lines 13-47) to define each call connection between an AV device and its associated port, each call handle defining...."

Applicants respectfully disagree. The Hayden call appearance defines the status of all participants in a call, not the connection between a device and a port.

Furthermore, the "call appearance" of Hayden is not the same as the claimed call handle. Hayden's call appearance is, in fact, nothing more than a graphical representation of a single global centralized call state, representing the entire call. In contrast, the claimed call handle mechanism provides a decomposed, decentralized call state for independent manipulation and management of separate parts of a call. In independent claims 15 and 22 it is clear that an independent and separate call handle is created for each AV device in a teleconference call. The advantage of this is that one "portion" of a call can be separately "manipulated" independently of the other "portion" of the call.

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As to the rejection of independent claims 21 and 28 (along similar lines as dependent claim 19 and based on Hayden plus Bales plus others), Applicants comment as follows. As clearly stated in, Hayden *does not allow, much less teach or imply*, the functionality of independent claims 21 and 28. Specifically, Hayden indicates that "the actions which *cannot be controlled* by the user are: ... a remote party drops and a remote party adds."<sup>1</sup> (our emphasis) Not only does this relate to the obviousness of combining Mauro, Hayden, Palmer and Bales, but it also indicates the substantial difference between the call appearance approach of Hayden and the claim call handle mechanism. Further, independent claims 21 and 28 are limited to reflect that *any one* of a plurality of users can remotely disconnect or put on hold *any one* of a number of users. It is submitted that this claimed configuration is neither disclosed in nor obvious from the cited references. As indicated above, Hayden specifically states that it cannot do this. Also, Bales does not disclose the claim limitation where *any one of the users* can disconnect or place on hold another user. Indeed, Bales specifically states that only the "station controlling an individual conference can terminate any [other] station..." and goes on to declare "A station set which is a sub-party to a conference can *only* terminate itself from the conference and is *incapable* of terminating another station set." [Column 7, lines 58 to 63, emphasis added]. This is not surprising when the Bales architecture is considered. Bales uses an architecture based on one station controlling a call. [Column 7, lines 26 to 39, describing Figs 8 and 9] Thus, Bales is a hierarchical configuration.

In stark contrast, the invention claimed in these specific claims is based on an architecture where all "stations" are equal peers with equal functionality.

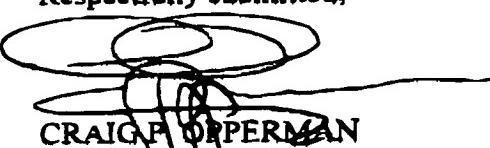
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In any event, it is not proper to combine Hayden (that expressly says a feature cannot be done) with Bales to obtain the claimed invention.

#### **CONCLUSION**

For all the above reasons, therefore, the claims are believed patentable. Accordingly, Applicants request entry of this amendment allowance of this application. For the examiner's convenience, a clean copy of the claims are attached.

Respectfully submitted,



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### CLEAN COPY OF THE CLAIMS

**15. A teleconferencing system comprising:**

- (a) a plurality of AV devices, each capable of
  - (i) originating and reproducing
    - (1) user related audio and video signals;
- (b) a plurality of communications ports, each supporting
  - (i) at least one of the group of switch connections consisting of
    - (1) video in, video out, audio in and audio out; and
- (c) at least one communication path,
  - (i) arranged for transport
    - (1) of audio and video signals,

wherein the system is configured to

- (i) to control a communication connection
  - (1) between two of the AV devices,
  - (2) over the communication path,
- (ii) by creating,
  - (1) as a result of a call request,
  - (2) at least a first call handle,
    - i. associated with one of the two AV devices and, thereafter,
  - (3) at least a second call handle,
    - i. associated with the other of the AV devices,
  - (4) each call handle defining,
    - i. for its respective AV device,
    - ii. a call state, being at least one of the group consisting of

active and hold states; and

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the port switch connections involved in the communications connection.

**16. The system according to claim 15, further comprising**

**(a) at least one signal processor, including**

**(i) at least three communications ports**

wherein the system is further configured to

**(i) control communications connections among**

**(1) three or more AV devices and**

**(2) one of the signal processors**

**(ii) by generating a plurality of call handles**

**(1) one associated with each of the three or more AV devices and**

**i. one associated with each of the three or more ports on the**

**signal processor.**

**17. The teleconferencing system of claim 15, wherein the system is further configured to:**

**(a) detect,**

**(i) during a first teleconference communication**

**(1) between users of first and second of the AV devices,**

**(ii) an attempt**

**(1) from a third user**

**(2) to initiate a second teleconference communication**

**i. with the second user,**

**(b) notify**

**(i) the second user**

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- (ii) of the attempt; and
- (c) allow
  - (iii) the second user
  - (iv) to add
    - (1) the third device
    - (2) to the first communication.

**18. The teleconferencing system according to claim 16, wherein the system is configured:**

- (a) to detect and add
  - (i) a fourth AV device
  - (ii) to an existing teleconference communication,
- (b) by creating a call handle
  - (i) associated with each of the fourth device and with a fourth- device associated port at the signal processor.

**19. The teleconferencing system of claim 16, wherein the system is further configured to**

- (a) allow any device user
  - (i) active in a teleconference communication
    - (1) with at least one other device user,
- (b) to do at least one of the group consisting of
  - (i) place on hold,
    - (1) at least one of the other device users,
  - (2) by causing the system to change the state, of at least one call handle associated with that other device user, from an active to a hold state.

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(ii) disconnect

(1) at least one of the other users; and

(iii) select

(2) a new user

i. from among a plurality of potential users and

(3) add the new user

i. to an active teleconference communication,

i. by causing the system to generate at least one call handle

associated with that new user.

**20. The teleconferencing system of claim 15, wherein the system can**

(a) support a maximum number of N communications

(i) for an AV device; and

(b) enable a user,

(i) operating that device,

(ii) to select N of M possible communications,

(iii) when faced with M possible communications,

(1) where M is greater than N.

**21. A teleconferencing system comprising:**

(a) at least three AV devices, each capable of

(i) originating and reproducing

(ii) user audio and video related signals; and

(b) at least one communication path,

(i) arranged for transport

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- (1) of audio and video signals,
- (ii) to define a teleconference call
  - (1) among the device users,
  - (2) in which user audio and video is displayed at a device,

wherein the system is configured to

- (i) allow a user
  - (1) of any of the devices
  - (2) active in a teleconference call
    - i. with other users,
- (ii) to do at least one of the group consisting of:
  - (1) place on hold,
    - i. at least one of the other users; and
  - (2) disconnect
    - i. at least one of the other users.

**22. A method of conducting a teleconference using a system including:**

a plurality of AV devices, each capable of

originating and reproducing

audio and video signals,

a plurality of communications ports each supporting

at least one of the group of switch connections consisting of

video in, video out, audio in and audio out; and

at least one communication path

arranged for transport of audio and video signals,

the method comprising the steps of

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- (a) controlling communication connections
  - (i) between two of the AV devices,
  - (ii) over the communications path,
- (b) by creating, as a result of a call request,
  - (i) at least a first call handle,
    - (1) associated with one of the two AV devices and, thereafter,
  - (ii) at least a second call handle
    - (1) associated with the other AV device,
  - (iii) each call handle defining,
    - (1) for its respective AV device,
    - (2) a call state being at least one of the group consisting of active and hold states, and
    - (3) the port switch connections involved in the communications connection.

**23. The method according to claim 22, wherein**

**the system further includes**

**at least one signal processor and**

**wherein, in controlling communication connections between three or more AV devices, the method further comprises the steps of**

- (a) generating a plurality of call handles
  - (1) one associated with each of the three or more AV devices and
  - (2) one associated with each of the three or more ports on the signal processor.

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**24. The method of claim 22, wherein the method further comprises the steps of:**

- (a) detecting,**
  - (i) during a first teleconference communication**
    - (1) between first and second AV device users,**
    - (ii) an attempt**
      - (1) by a third user**
      - (2) to initiate a second teleconference communication**
      - (3) with the second user,**
- (b) notifying**
  - (i) the second user**
  - (ii) of the attempt; and**
- (c) allowing**
  - (i) the second user**
  - (ii) to add**
    - (1) the third caller**
    - (2) to the first teleconference communication.**

**25. The method of claim 23, further comprising the steps of:**

- (a) detecting and adding**
  - (i) a fourth user**
  - (ii) to an existing teleconference communication**
- (b) by creating a call handle**
  - (i) associated with each of the fourth device with a fourth-device associated port at the signal processor.**

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**26. The method of claim 22, further comprising the steps of**

**(a) allowing any device user**

**(i) active in a teleconference communication**

**(1) with at least one other user,**

**(ii) to do at least one of the group consisting of:**

**(1) place on hold,**

**i. at least one of the other device users,**

**ii. by causing the system to change the state, of at least one call handle associated with that other user(s), from active to hold;**

**(2) disconnect**

**i. at least one of the other users; and**

**(3) select**

**i. a new user**

**i. from among a plurality of potential users and**

**ii. add the new user**

**i. to an active teleconference communication,**

**(iii) by causing the system to generate at least one call handle**

**associated with that new user.**

**27. The method of claim 22, wherein the system can**

**support a maximum number of N communications**

**for an AV device;**

**the method further comprising the steps of:**

**(a) enabling a user,**

**(i) operating that device,**

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- (b) to select N of M possible communications,
  - (i) when faced with M possible communications
    - (1) where M is greater than N.

**28 A method of conducting a teleconference using a system including at least three AV devices, each capable of originating and reproducing user audio and video related signals; and at least one communication path; arranged for transport of audio and video signals, among the AV devices, to define a teleconference call among the device users, in which user audio and video is displayed at a device,**

**the method comprising the steps of**

- (a) allowing a user
  - (i) of any of the devices
  - (ii) active in a teleconference call
    - (1) with other users,
- (b) to do at least one of the group consisting of:
  - (i) place on hold,
    - (1) at least one of the other users; and
  - (ii) disconnect
    - (1) at least one of the other users.

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29. The teleconferencing system according to claim 15, wherein
  - (a) the call handle is created immediately prior to the communication connection being established.
30. The teleconferencing system according to claim 15, wherein
  - (a) the communication connection
    - (i) becomes active if, and only if, both call handles associated with the two AV devices have active states; and
    - (ii) goes on hold if the call handle associated with either of the two AV devices has a hold state.
31. The teleconferencing system according to claim 15, wherein
  - (a) any call handle includes
    - (i) address information associated with the communication connection.
32. The teleconferencing system of claim 15, wherein
  - (a) each call handle can also define a state of one of the group consisting of
    - (i) idle and ringing states.
33. The method according to claim 22, wherein
  - (a) the call handle is created immediately prior to the communication connection being established.

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34. The teleconferencing system according to claim 22, wherein

(a) the communication connection

(i) becomes active if, and only if, both call handles associated with the two AV devices have active states; and

(ii) goes on hold if the call handle associated with either of the two AV devices has a hold state.

35. The method according to claim 22, wherein

(a) any call handle includes

(i) address information associated with the communication connection.

36. The method of claim 22, wherein

(a) each call handle can also define a state of one of the group consisting of

(i) idle and ringing states.